VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1 and 6 have been cancelled and claims 2, 3, 5, 7, 8, 10, 14, 15 and 21 have been amended as follows:

1. Cancelled

2. (Amended) A nucleic acid molecule comprising at least a first signal sequence [site] and a second signal sequence [site] and a recombinase gene operably linked to an expression control sequence, said first and second signal sequences [sites] being positioned to mediate excision or inversion of a sufficient portion of either the recombinase gene or the expression control sequence to inactivate or decrease [extinguish] recombinase activity when the first and second signal sequences [sites] are contacted with a recombinase, thereby decreasing or eliminating recombinase-mediated toxicity.

3. (Amended) The nucleic acid molecule of claim[s 1 or] 2, wherein said nucleic acid molecule is included in a retroviral vector and said signal sequence is inserted into a retroviral long terminal repeat of said vector.

5. (Amended) The nucleic acid molecule of claim[s 1 or] 2, wherein said recombinase is selected from the group consisting of a *cre* [*cre*] recombinase and a Flp recombinase and the signal sequence [site] is selected from the group consisting of lox sequences [sites] and FRT sequences [sites].

6. Cancelled

7. (Amended) The nucleic acid molecule of claim 2 [6], wherein said signal sequences flank [said sequence encoding] said recombinase gene or said expression control sequence [a positive regulatory element] of [said sequence encoding] said recombinase gene.

8. (Amended) A cell comprising the nucleic acid molecule of [any one of] claim[s 1,] 2

[or 6].

10. (Amended) The cell of claim 9, wherein said recombinase, when expressed in said cell, excises or inverts a sequence in said second nucleic acid molecule that is located between said signal sequences in said second nucleic acid molecule, and the excision or inversion results in modulation of expression of said target gene, thereby decreasing or eliminating recombinase-mediated toxicity.

14. (Amended) A cell comprising two nucleic acid molecules, wherein the first nucleic acid molecule comprises a recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase and the second nucleic acid molecule comprises a target gene and signal sequences recognized by a recombinase [The cell of claim 11], wherein said signal sequences in said second nucleic acid molecule flank a negative regulatory element of said target gene, so that expression of said recombinase results in excision of said negative regulatory element, and activation of expression of said target gene.

15. (Amended) A cell comprising two nucleic acid molecules, wherein the first nucleic acid molecule comprises a recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase and the second nucleic acid molecule comprises a target gene and signal sequences recognized by a recombinase [The cell of claim 9], wherein said signal sequences in said second nucleic acid molecule are in an inverted orientation with respect to one another.

21. (Amended) A cell comprising two nucleic acid molecules [The cell of claim 9], wherein the first [said] nucleic acid molecule, comprising a [said sequence encoding said] recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase and the [said] second nucleic acid molecule, comprising a target gene and signal sequences recognized by a recombinase, are present in separate vectors.

recombinase activity when the first and second signal sequences are contacted with a recombinase, thereby decreasing or eliminating recombinase-mediated toxicity.

3. (Amended) The nucleic acid molecule of claim 2, wherein said nucleic acid molecule is included in a retroviral vector and said signal sequence is inserted into a retroviral long terminal repeat of said vector.

4. The nucleic acid molecule of claim 3, wherein said signal sequence is inserted into the U3 region of the 3' retroviral long terminal repeat of said vector.

5. (Amended) The nucleic acid molecule of claim 2, wherein said recombinase is selected from the group consisting of a *cre* recombinase and a Flp recombinase and the signal sequence is selected from the group consisting of lox sequences and FRT sequences.

7. (Amended) The nucleic acid molecule of claim 2, wherein said signal sequences flank said recombinase gene or said expression control sequence of said recombinase gene.

8. (Amended) A cell comprising the nucleic acid molecule of claim 2.

9. The cell of claim 8, further comprising a second nucleic acid molecule comprising a target gene and signal sequences recognized by said recombinase.

10. (Amended) The cell of claim 9, wherein said recombinase, when expressed in said cell, excises or inverts a sequence in said second nucleic acid molecule that is located between said signal sequences in said second nucleic acid molecule, and the excision or inversion results in modulation of expression of said target gene, thereby decreasing or eliminating recombinase-mediated toxicity.

11. The cell of claim 10, wherein said signal sequences in said second nucleic acid molecule are in direct orientation with respect to one another.

12. The cell of claim 11, wherein said signal sequences in said second nucleic acid molecule flank said target gene, so that expression of said recombinase results in excision of said target gene, and inactivation of expression of said target gene.

13. The cell of claim 11, wherein said signal sequences in said second nucleic acid molecule flank a positive regulatory element of said target gene, so that expression of said recombinase results in excision of said positive regulatory element, and inactivation of expression of said target gene.

14. (Amended) A cell comprising two nucleic acid molecules, wherein the first nucleic acid molecule comprises a recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase and the second nucleic acid molecule comprises a target gene and signal sequences recognized by a recombinase, wherein said signal sequences in said second nucleic acid molecule flank a negative regulatory element of said target gene, so that expression of said recombinase results in excision of said negative regulatory element, and activation of expression of said target gene.

15. (Amended) A cell comprising two nucleic acid molecules, wherein the first nucleic acid molecule comprises a recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase and the second nucleic acid molecule comprises a target gene and signal sequences recognized by a recombinase, wherein said signal sequences in said second nucleic acid molecule are in an inverted orientation with respect to one another.

16. The cell of claim 15, wherein said signal sequences in said second nucleic acid molecule flank an inverted positive regulatory element of said target gene or an inverted coding region of said target gene, so that expression of said recombinase results in inversion of said inverted positive regulatory element or inversion of said inverted coding region, and activation of expression of said target gene.

17. The cell of claim 15, wherein said signal sequences in said second nucleic acid molecule flank an inverted negative regulatory element of said target gene or a coding region of said target gene, so that expression of said recombinase results in inversion of said inverted negative regulatory element or inversion of said coding region, and inactivation of expression of said target gene.

18. The cell of claim 8, wherein said signal sequences in said nucleic acid molecule comprising said sequence encoding said recombinase flank said nucleic acid sequence encoding said recombinase.

19. The cell of claim 8, wherein said signal sequences in said nucleic acid molecule comprising

said sequence encoding said recombinase flank a positive regulatory element of said nucleic acid sequence encoding recombinase.

20. The cell of claim 9, wherein said nucleic acid molecule comprising said sequence encoding said recombinase and said second nucleic molecule are present in the same vector.

21. (Amended) A cell comprising two nucleic acid molecules, wherein the first nucleic acid molecule, comprising a recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase and the second nucleic acid molecule, comprising a target gene and signal sequences recognized by a recombinase, are present in separate vectors.